GETRÄNKE-TECHNOLOGIE SELBACH

Beverage Dispensing Technology

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Operating Manual

Fruit Juice Dispenser

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The device described in this manual may only be put into operation provided the operators are suitably trained and the operating and maintenance personnel have studied the instructions closely.

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1.00 Safety instructions

1.10 Assembly/start-up

Place the device on an even, dry and clean surface. Make sure the connecting cable leads directly to the socket, and that it cannot be bent or squashed.
Only use the original hoses for the water supply.
The device must be adequately ventilated at all times! Make sure no objects are placed on or under the device!
The device can be assembled horizontally using the height-adjustable feet.

The following safety measures must be observed without fail:

- Never exceed the input limits in the parameter list in either direction
- Operating temperature range +10 to +40 degrees Celsius
- Maximum assembly height 1000m above sea level
- Do not allow dirt (dust, fibres, etc.) to get inside the device
- Only connect to the prescribed supply voltage
- If using in extreme electrical conditions, ensure adequate filtration of the mains voltage
- Protect the assemblies from moisture, especially penetrating liquids
- Observe the hazard warnings and safety instructions on the electrical components and in this manual
- Observe the generally applicable safety regulations when laying cables (minimum distances, insulation, strain relief, etc.)
- Observe the warnings and service instructions in this manual

1.20 Safety instructions

The device described in this manual may only be operated and connected by suitably trained personnel. Adjustments, maintenance and repair work on the open or live device may only be performed by a specialist.

As with all technical equipment, this device is only guaranteed to work properly and safely provided the generally applicable safety precautions and the specific safety instructions in this manual are observed during operation and service.
Serious damage to persons and property can be caused by:

- Improper use
- Incorrect installation or operation
- Unauthorised removal of the necessary protective coverings or housing
- Unauthorised opening of the device during operation

1.21 Safety risks

If a safety risk is considered to exist for any reason, the device must be taken out of operation and suitably marked in order to prevent it from being started up again inadvertently by a third party. The customer service department must also be notified accordingly.

Examples of safety risks include failure to operate in the prescribed manner or visible signs of damage.

1.22 Safety directives

The device may only be operated with a properly connected PE conductor.

1.30 Spare parts

Assemblies or components may only be replaced with identical spare parts. Do not use different sized fuses to those prescribed under any circumstances.

1.40 Transportation/storage

Any damage discovered after delivery must be reported immediately to the transport company. If necessary, take suitable measures to prevent the device from being put into operation. The device may only be stored in a dry, dust-free environment at a temperature between 0 and 60 degrees. After transporting the device to the site of installation, make sure it is not put into operation for at least 24 hours in order to eliminate any condensation in the electrical components.

1.50 Electrical connection

Electrical tasks may only be carried out once:

- The electrical system has been disconnected from the voltage supply and prevented from being switched on again accidentally
- The absence of voltage has been checked
- You have make sure that additional monitoring and protective devices for the control system are correctly installed.

When connecting the wires, make sure that

- The applicable standards and regulations are observed
- A permanent electrical connection is guaranteed

1.51 Water connection

The device has a built-in, permanently adjusted water pressure reducing valve. The system water pressure must not exceed a maximum of 7 bar or a minimum of 1.9 bar. If the water pressure is higher, please contact the responsible service department. The water supply is connected via an adapter with a 5/8“ thread on the underside of the device. The water connecting nipple on the device is included in the scope of delivery.

1.52 Operation

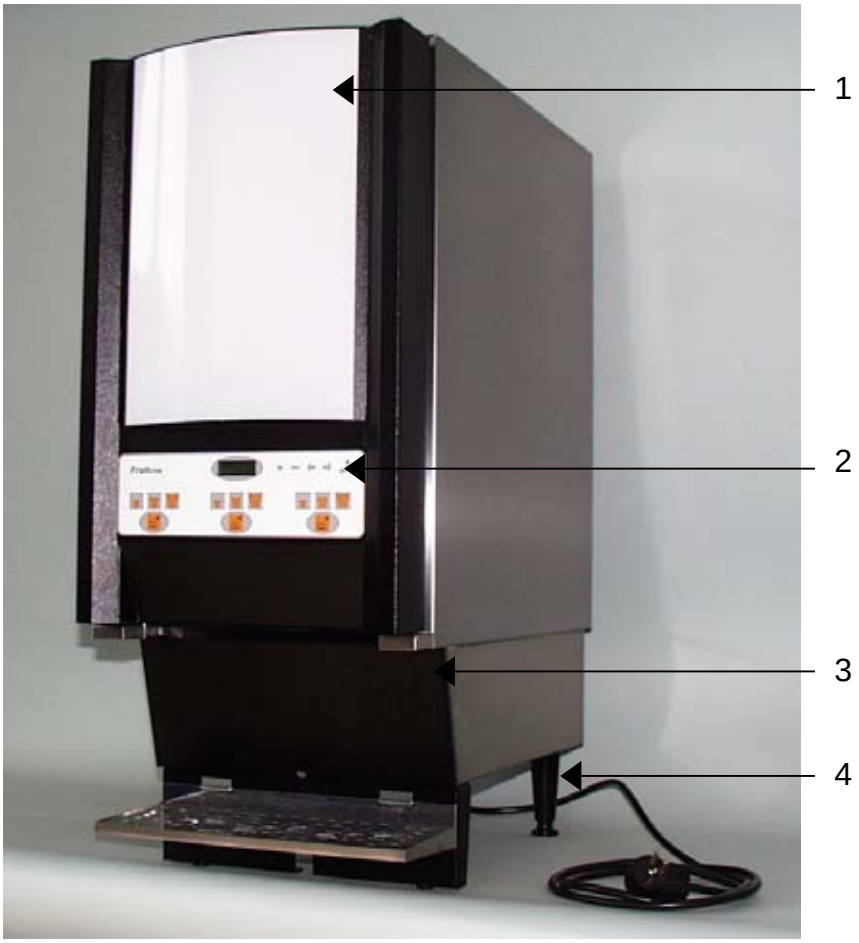
Should the device deviate in any way from its normal operation, always take it out of operation if in doubt and mark it suitably in order to prevent it from being started up again by a third party. Also notify the customer service department.

1.60 Service

All service instructions contained in the manual(s) must be observed without fail. Special attention should be paid to the safety instructions in the electrical documentation supplied with the external devices.

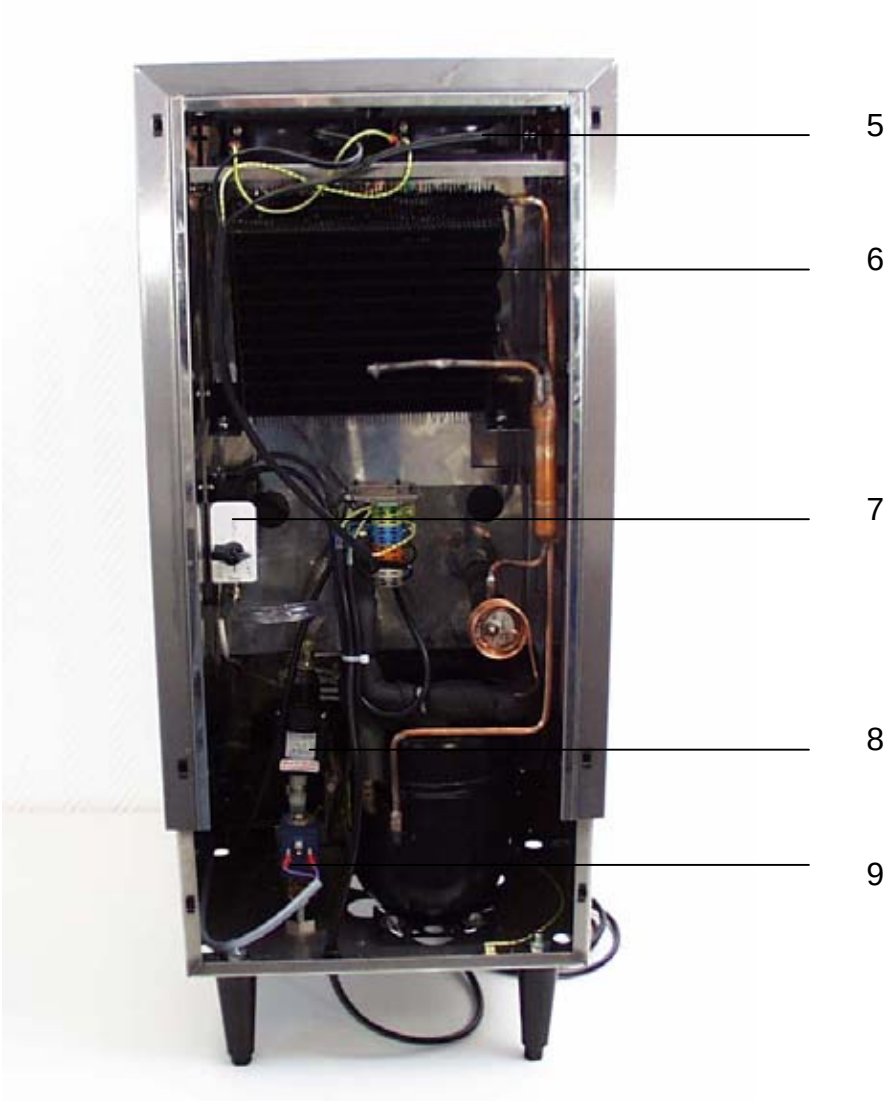
2.00 View of device

2.01 Front



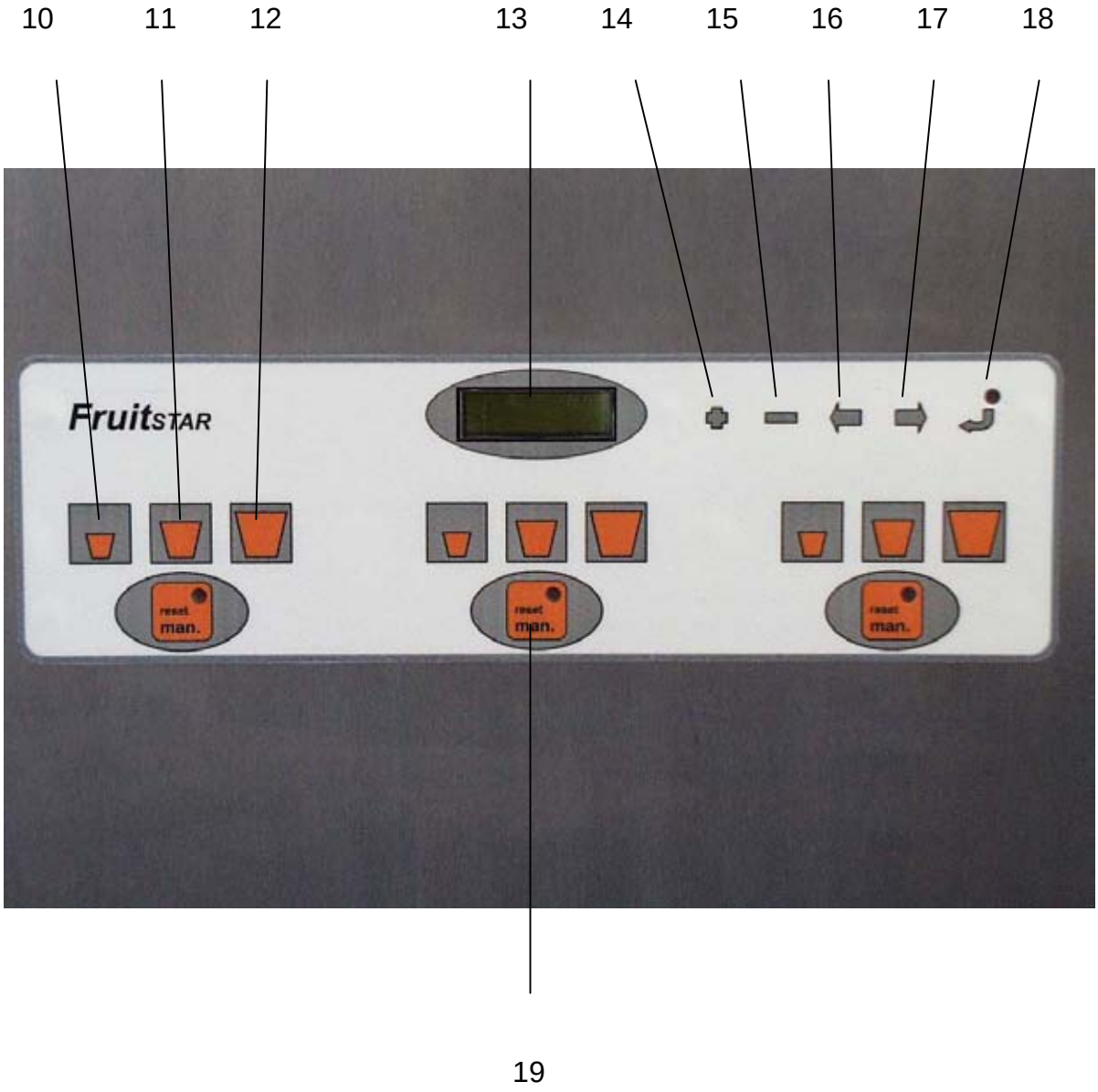
1 Door of cooling chamber
2 Operator panel
3 Machine interior
4 Adjustable feet

2.02 Rear



5 Fan
6 Condenser
7 Thermostat
8 Pressure reducing valve
9 Main water valve

2.03 Operating elements



10 Small portion
11 Medium portion
12 Large portion
13 Display
14 Increase value
15 Decrease value
16 One digit to left
17 One digit to right
18 Enter
19 Manual beverage dispenser

2.04 Key switches

The dispenser can be switched off via the key switch located on the inside of the door. In this case, it is no longer possible to dispense portions or edit parameters. The refrigeration function of the device is not affected, however.

Keep the key in a safe place, and never leave it in the device!

3.00 Status LED controller main board

The status LED indicates the following state during operation:

Status	State
LED extinguished	A fault has occurred. Please check the fuses and voltage supply
Flashing	Normal operating state
Continuous light	The controller is waiting for new software to be loaded by the PC

4.00 Controller software

4.01 Menu structure

4.02 Code number

Sensitive settings are protected by a code number. The software distinguishes between different access levels, however, so that not all menu options can be accessed by entering a single number. The code number input is basically the same for all areas. Since the dispenser is not equipped with a numeric keypad, the input is performed using the plus and minus key.

Input example:
For the purposes of our example, we will use the code number 3241.
First press the Enter key (E) until the message text (FSD V1.xxx) appears. Do not release the key yet!! Always begin your input with the plus key, pressing it until the respective digits of the code number are reached. In this example, press the plus key 3 times [3241] (keeping the Enter key pressed all the time!). Then press the minus key twice [3241], then the plus key 4 times again [3241] and finally the minus key once more [3241]. Only now can you release the Enter key. The entered code number (3241) will now be evaluated by the controller. If the number is correct, you will now find yourself in the menu at the appropriate access level.

The code numbers for the individual access levels are not given in this manual but are communicated to you separately.

4.03 Editing menu options

You can move through the menu with the +/- keys. If you wish to change a value, press the Enter key. The cursor will now begin to flash, and you can change the desired values by pressing the + or – key in order to increase/decrease the selected digit. To move from one number to another, use the arrow keys. Once you have entered the value, save it and exit again with the Enter key.

To exit the menu (i.e. quit the input function), press the + and – keys SIMULTANEOUSLY.

Access level 1	Access level 2	Access level
	Language	Language
		Water pulses
		Syrup pulses
		Mixing ratio
Small portion	Small portion	Small portion
Medium portion	Medium portion	Medium portion
Large portion	Large portion	Large portion
Manual max.	Manual max.	Manual max.
		Pre-feed small
		Pre-feed medium
		Pre-feed large
		Post-feed small
		Post-feed medium
		Post-feed large
		Bag size
		Bag res.
Total (port.) small	Total (port.) small	Total (port.) small
Total (port.) medium	Total (port.) medium	Total (port.) medium
Total (port.) large	Total (port.) large	Total (port.) large

5.00 Variable parameters

The same pump parameters are available for all 4 pumps. The description of the parameters therefore only refers to the general operating principle and not any one particular pump. To change the values of the individual pumps (feeders), select the menu option with the corresponding feeder number (L1,L2,L3,L4).

5.01 No. of pulses per 100ml of syrup

Fitted to the motor shaft of the pump is a sensor which measures the number of motor revolutions. This sensor guarantees that the dispensed beverage always contains the same amount of syrup. By entering the number of pulses per 100ml of syrup, it is possible to calibrate the pump to a different feed hose or differently tuned gear.

The syrup pulses are adjusted at the factory and do not need to be readjusted except during servicing!

5.02 No. of pulses per litre of water

The flow rate of the water is measured with the aid of a liquid turbine. This sensor guarantees that the dispensed beverage always contains the same amount of water. By entering the number of pulses per litre of water, it is possible to adjust the system to a different type of turbine.

The water pulses are adjusted at the factory and do not need to be readjusted except during servicing!

5.03 Mixing ratio

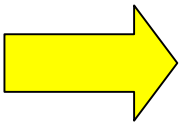
With this type of dispenser, you can enter the mixing ratio of your beverage numerically. Since the flow rate of the water and syrup is recorded by sensors, a constant mixing ratio is guaranteed at all times regardless of any fluctuations in the water pressure. The mixing ratio is entered in the form of the number of parts of water per part of syrup, i.e. a mixing ratio of 4,0 means 4 parts water to one part syrup per beverage size.

5.04 Portion size

The dispenser is equipped with a keyboard at the front. In each feeder section, there are 4 keys for dispensing the product. The top three keys are used to dispense portions of different sizes. The portion sizes can be defined individually: simply enter the dispensed volume in ml.

5.05 Manual limitation

At the bottom of the product dispensing keys you will find the Manual key. Press this key if you want to dispense the product without portioning. Dispensing will stop as soon as you release the key. In order to prevent a product from being dispensed continuously due to a faulty key or the removal of more product than allowed, the dispensed volume is limited to the value set here.



Please note that the Manual key interrupts the portioning procedure. If the operator has selected one of the 3 portion sizes accidentally, he can therefore stop the dispensing process by pressing the Manual key.

5.06 Water pre- and post-feed

In order to dispense syrup-based beverages, a small amount of water has to be dispensed before the syrup itself. This is designed to prevent the syrup from sticking to the bottom of the glass and thus ensures a more even distribution.

The water post-feed is designed to ensure that the syrup is fully rinsed out of the mixing spout in order to prevent a build-up of germs.

Please enter the appropriate pre- and post-feed volumes here in ml.

If you are not sure which pre- and post-feed volumes to enter, please contact the responsible service department.

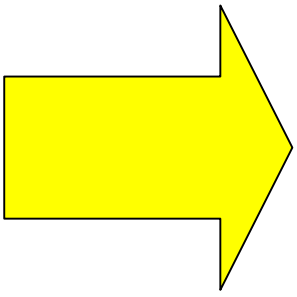
5.07 Language

The device can be set to 3 different languages. If your language is not covered, please contact the responsible service department.

5.08 Product dispensing operations

The number of product dispensing operations is stored in a non-volatile memory. This value is recorded separately per feeder for each beverage size. The total throughput for a particular feeder is also recorded. Not all of these values are displayed in the menu: to check all the values, please use the PC software.

Note on memory:



In order to extend the life of the internal memory module, the data are not loaded into the non-volatile memory after every dispensing operation, but are initially stored in a buffer. The control system only saves the data to the backing memory if no product is dispensed for 5 minutes or no saving takes place for an hour. If you want to make sure the data of the last dispensed beverage are saved, wait approx. 5 minutes before removing the mains plug.

The setting data cannot be lost, as they are transferred to the backing memory immediately on input.

5.09 “Empty” monitor

A bag size can be entered for each product feeder. The dispensed volume of product is then subtracted after each dispensing operation. When the residual volume reaches zero, the feeder in question is blocked after the dispensing operation and a corresponding message is generated. The LED of the Manual key also lights up at the same time, so that you can tell from a distance that the feeder is no longer in action.

Whenever you insert a new bag in the device or replace a bag which was not completely emptied, you must always reset the counter for the bag size. To do this, press the Enter key and the Manual key of the relevant feeder SIMULTANEOUSLY until the reset message appears (approx. 5 seconds) and the LED of the Manual key lights up.

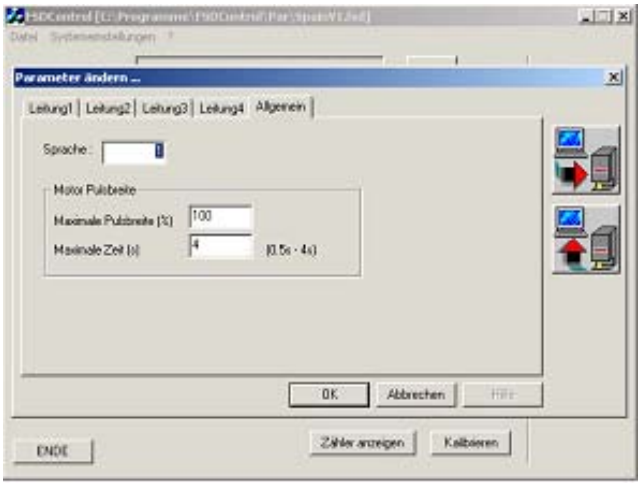
To suppress the bag monitoring function, set the bag size to zero.

5.10 Motor protection

The computer determines the required motor rpm (= motor impulses) on account of the incoming water impulses and the passed on syrup impulses. The motor rpm collapses with a heavy-working pump. The torque, which is necessary to move a heavy-working pump rpm-adjusted, climbs over the max. torque of the motor (Overload). The safety device prevents an overload of the motor by an adjustable max. permissible motor-pulse-width for an adjustable time between 0,5 and 4 seconds.

The maximum pulse-width is set at 100 % and the maximum time at 1 second by the plant.

This safety device prevents damages at the pump motor, which can result from dirt or faults at the pump.



6.00 Display

When the adapter box is connected to the display, the word “LOCK“ appears in the display, and all information is relayed to the PC. In this case, the display is no longer used for display or input purposes.

If a PC is connected to the display, the keyboard is also locked. The device is then operated via the PC software.

7.00 PC connection

The PC connection offers quick access and is a convenient way of editing all device parameters except for the temperature.

In order to connect a PC, an interface converter is used (optional).

Please do not try to connect the dispenser without this adapter under any circumstances, as this may destroy the PC interface.

7.01 Connecting the PC

- Install the FSD Control program on your PC. This is performed via an installation routine.
- Connect the interface converter (Fig. 1) to the PC
- Open the service cover in the door of the dispenser (Fig. 2)
- Plug the PC connecting cable into the interface (Fig. 3 + 4)

Fig. 1

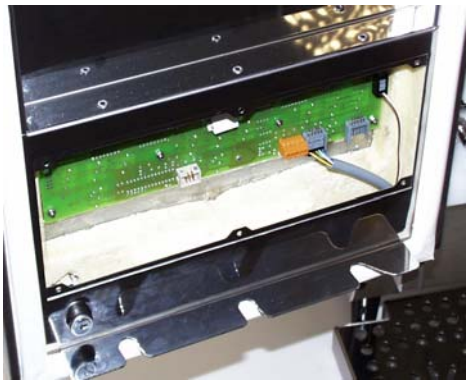


Fig. 2

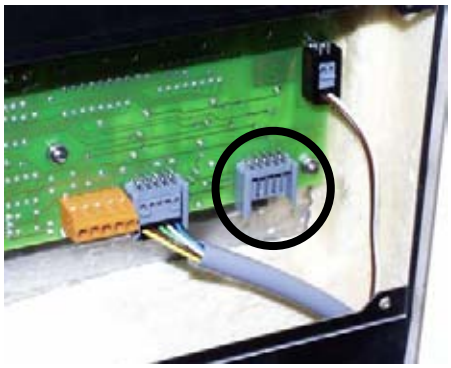


Fig. 3

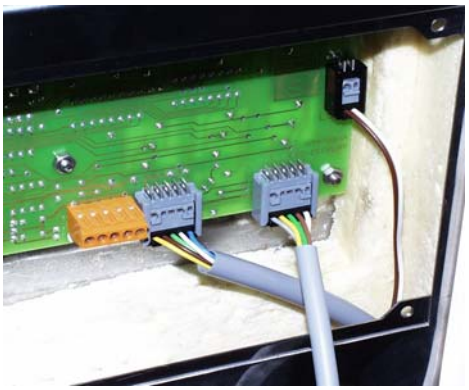
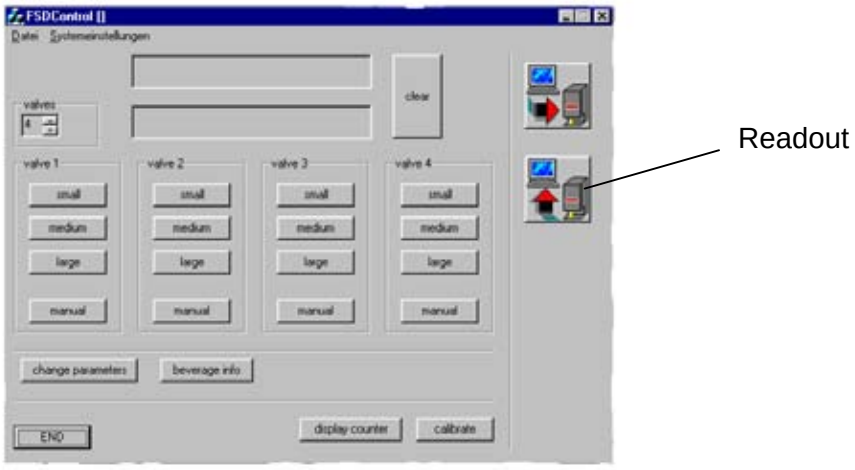


Fig. 4

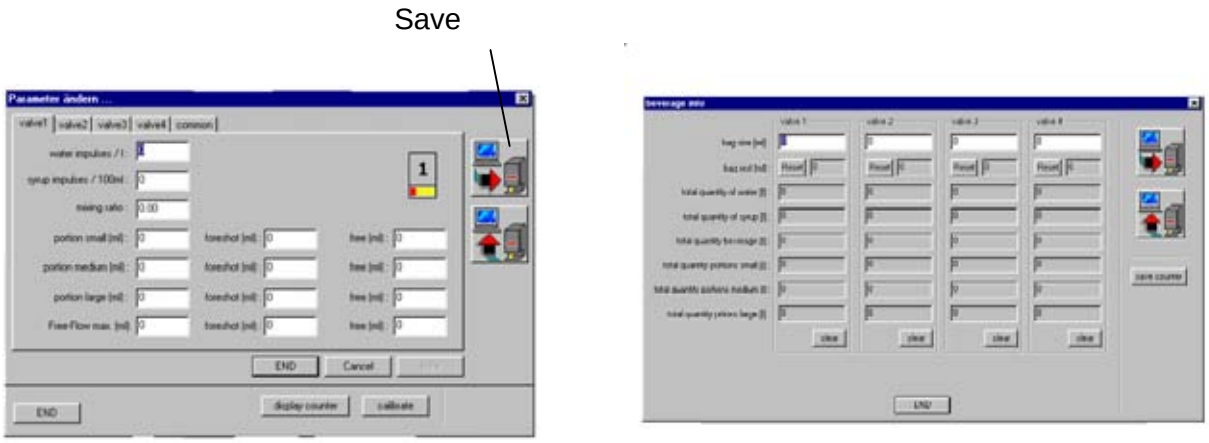
7.02 Reading out parameters with the PC

The parameters are transferred to the PC by pressing the “Readout“ button.



7.03 Editing parameters with the PC

Change the parameters according to your requirements, then save the data in the dispenser.



The parameters may only be changed by trained personnel !

8.00 Temperature adjustment

The temperature is adjusted via a thermostat at the rear of the device. For this purpose, remove the rear panels (13.01 Opening the rear panels). The factory setting is approx. 3 degrees Celsius. The set temperature is the water temperature; the cooling chamber temperature is approx. 1.5 degrees Celsius above this value.

9.00 Drainage of condensation

The built-up condensation is channelled to the drip tray via a hose system. Please check the drain hose to make sure it is never blocked or covered.

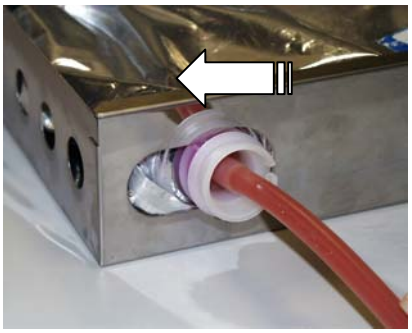
10.00 Bag container

In order to ensure safe storage of the syrups inside the device, the syrup bags are placed in the bag containers.

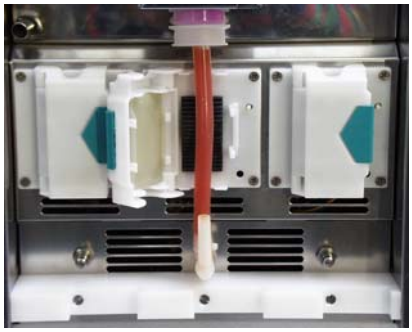
Open the bag container

- Place the syrup bag in the container so that the dispensing spout can be inserted through the hole in the container
- Push the bag adapter into the retaining device
- Close the bag container

11.00 Inserting the bag containers in the device



Insert the bag containers in the device so that the hoses make contact with the pump.



12.00 Pumps

The wave-like motion of the pump frame causes the syrup in the hose to be pumped to the dispensing spout in measured doses.

Take care to keep the pump blades clean. Juice concentrate between the blades will distroy pump and gear!

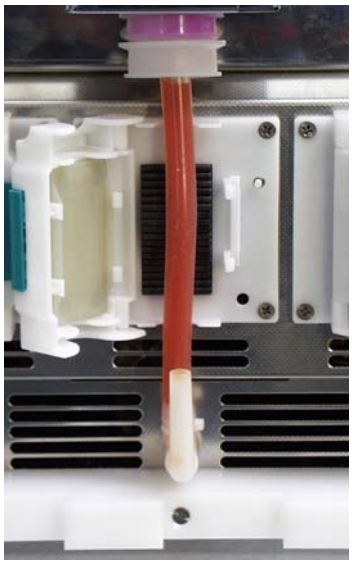
12.01 Opening the pump

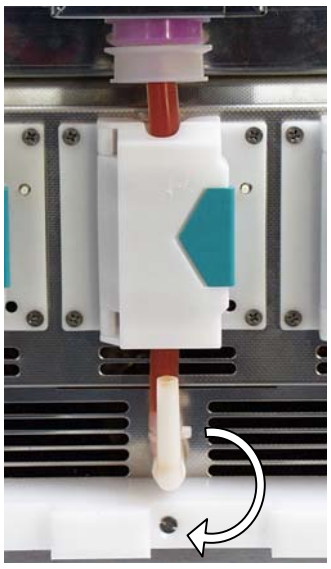
The pump cover can be released by pushing the open button at the side.

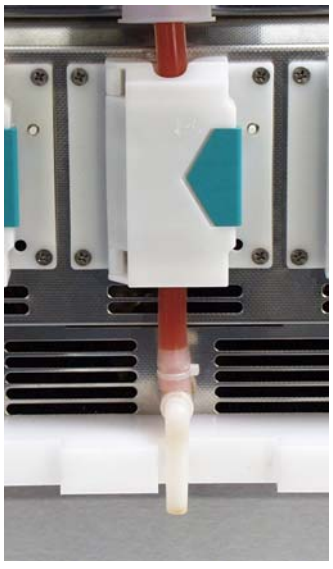
12.02 Inserting and connecting the feed hose

After opening the pump, insert the feed hose in the pump housing.

- Mount the dispensing spout on the water nozzle
- Close the pump
- Open the dispensing spout by rotating it half a turn to the right







12.03 Water flush

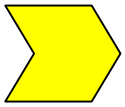
This key on the pump is used to flush the syrup out of the mixing spout completely in order to prevent a build-up of germs.

Only activate the water flush once the dispensing spout is mounted and pointing downwards !

13.00 Maintenance

13.01 Opening the rear panels

The rear panels of the device can be removed without the use of a tool. They are removed from the retainer by simply pulling them out from behind.



Never operate the device with the rear panels removed!
Ventilation of the condenser is only possible when the rear panels are mounted!

13.02 Cleaning

Only use mild detergents and a damp cloth for cleaning.
The water cooling element and water-conducting components may only be cleaned with beverage dispenser approved detergents.
If the pump-lamella is dirty, it is necessary that the pump is dismantled and cleaned into warm water by the service.

Do not allow any moisture to get inside the device.

13.03 Cleaning the condenser

The condenser should be cleaned of the accumulated dust at regular intervals (half-yearly). For this purpose, remove the rear panels and vacuum-clean the condenser from below.

14.00 Troubleshooting

Device not cooling	Check the mains connection. Is the thermostat switched on? Has the thermostat switched itself off?
Error message “No syrup pulses“	Notify the service department.
Error message “No water pulses“	Is the water connection OK? Is the water hose bent/ interrupted?
Syrup dripping	Is the water connection OK? Is there a minimum water pressure of 2 bar?
No beverage dispensed	Is the syrup bag sufficiently filled? Has the “empty” monitor blocked the pump?
Heavy condensation	Is the relative air humidity > 60%? Is the door opened very often? Is the door seal OK?
No internal cooling	Is the thermostat switched on? Has the thermostat switched itself off? Is the air circulation OK?

If you are unable to rectify a fault, please notify the responsible service department.

15.00 Technical data

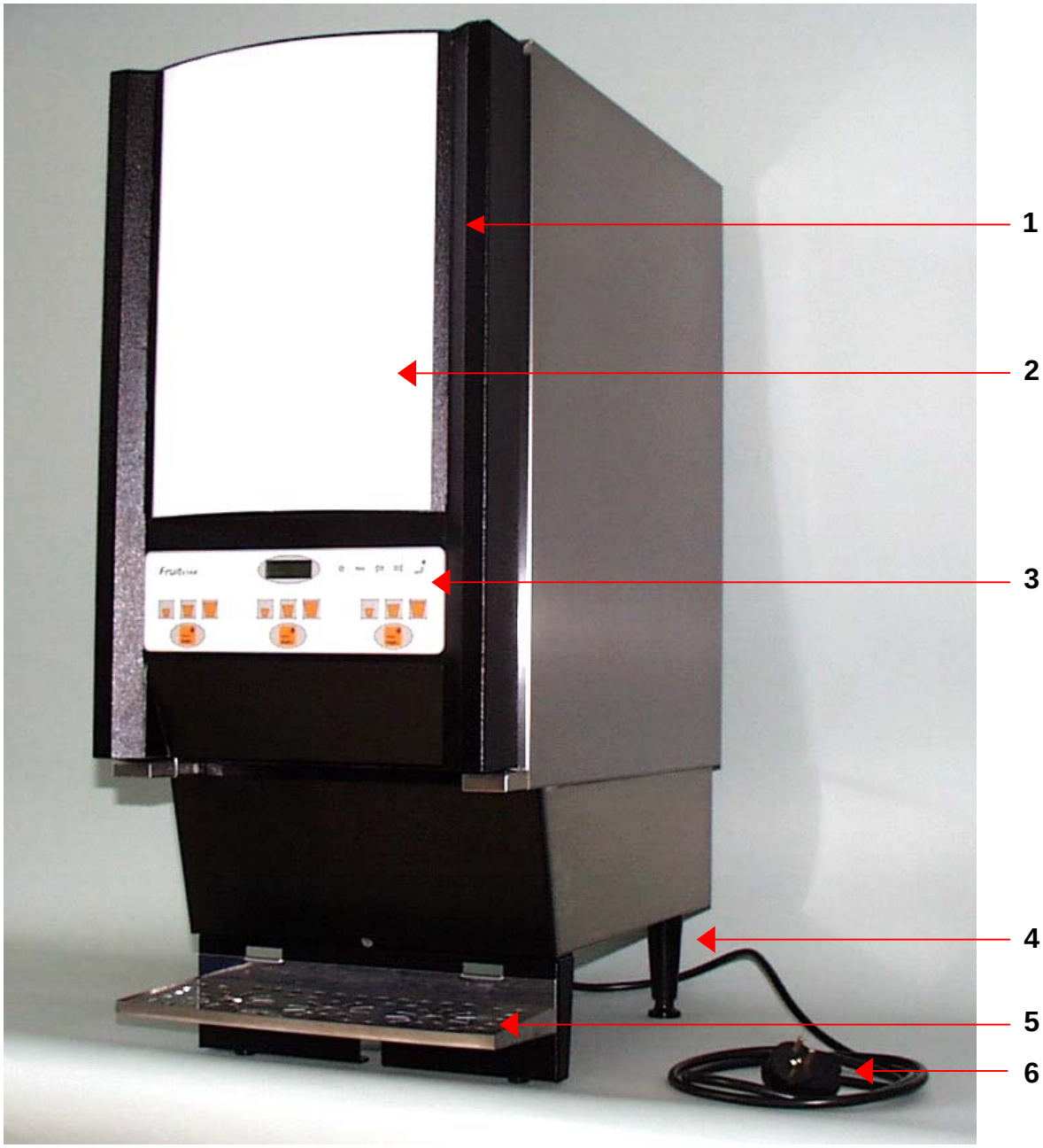
Voltage	240 V 50 Hz
Current	4.0 A
Power	370 W
Height	840 mm
Width	345 mm
Depth	575 mm
Weight	65 kg

16.00 Spare parts

Article	Art. no.
Adjustable feet	26-0182-0000
Bag container	35-1528-0000
Blind stopper	26-0076-0000
Capacitor compressor	11-0195-0005
Condenser	11-0032-0000
Connection plate, acrylic glass	26-0918-0000
Detachable-key switch	52-0115-0000
Display board	51-0932-0000
Door luting	26-0227-0000
Door of cooling chamber	35-1603-0000
Drip tray to put in	41-0110-1000
Expansion valve	11-0783-0000
Flat-type fan, condenser	50-0170-0000
Flat-type fan, cooling chamber	50-0050-0001
Flow monitor	52-0114-0000
Geared motor, compl.	50-0163-0001
Main board	51-0933-0000
Main lead	51-0002-0000
Main water valve, compl.	21-0331-0000
Operator panel	26-0187-0000
Pressure regulator	50-0145-0000
Pump	50-0051-0000
Pump power board	51-0934-0000
Solenoid valve	11-0192-0000
Soldering dryer	11-0016-0000
Starting device compressor	11-0097-0000
Thermostat	50-0133-0000
Thermostat knob	50-0103-0000
Transformer	51-0935-0000
Water nozzle	21-0327-0000

Please use original spare parts only

Photos Spare Parts (Front)



1 Door of cooling chamber – Art.-No. 35-1603-0000
2 Milk acrylic glass for illumination – Art.-No. 26-0918-0000
3 Operator panel – Art.-No. 26-0187-0000
4 Adjustable feet – Art.-No. 26-0182-0000
5 Drip-tray to put in – Art.-No. 41-0110-1000
6 Main lead – Art.-No. 51-0002-0000

Wiring diagramm